



California Energy Commission

Developing Local, Soft Targets to Achieve 12,000 MW DG Goal

**Lead Commissioner Workshop on Identifying and Prioritizing
Geographic Areas for Renewable Development in California**

California Energy Commission

May 10, 2012

Eli Harland

Energy Analyst, Renewable Energy Office

Eli.Harland@energy.ca.gov / 916-653-8906



Overview

- Rationale and assumptions for updated approach
- Summary of previous approach
- Methodology and results from updated approach



Rationale- Why Soft Targets?

- Governor Brown's Clean Energy Jobs Plan
 - *"California should develop 12,000 megawatts of localized energy by 2020"* (June 14, 2010)
- The Governor's Conference on Local Renewable Energy Resources
 - Segmenting the Governor's Localized Energy Goals (July 25, 2011)
- 2011 Integrated Energy Policy Report
- Renewable Power: Status and Issues



Assumptions

- Soft targets are undefined (technology and project type neutral).
- Renewable Distributed Generation:
 - RPS eligible and 20 megawatts or smaller
 - Behind the meter and wholesale
 - Interconnected at the distribution level -or-
 - Interconnected at the transmission level, but serving on-site load

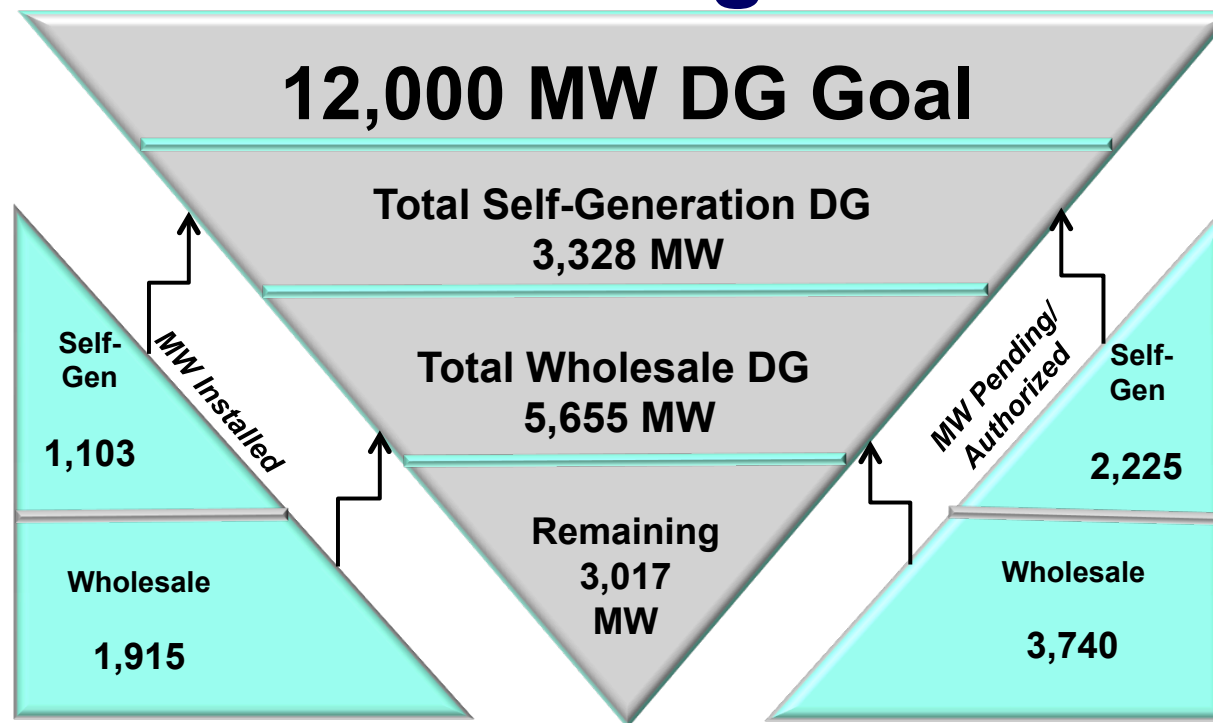


Previous Approach

- Bottom-up market based projection:
 - **Behind the meter:** CSI, SB 1, SGIP, ERP, biogas (6k cows/MW), and Foundation Windpower
 - **Wholesale:** IOU and POU Contract Database and REAT local permitting database
 - **Undefined:** LLNL resource maps, urban areas, and capped at 15% of peak circuit
- Technology specific (except “Undefined”).
- Targets segmented by region.



Existing Capacity Counts Toward DG Targets



Source: California Energy Commission. "Pending" capacity refers to projects approved under existing programs and in development but not yet completely installed. "Authorized" capacity refers to capacity allocated under existing programs that is not yet approved or installed. Existing programs include the Senate Bill 32 feed-in tariff, the Renewable Auction Mechanism, the Utility Solar Photovoltaic Program, and the California Solar Initiative. The Energy Commission acknowledges that the totals presented in this figure will need further refinement; for example, not all projects developed under the Renewable Auction Mechanism may qualify as wholesale DG under the definition of DG presented in this report.



Updated Approach

- Allocated the 12,000 MW goal based on each county's share of statewide:
 - Electric consumption (weighted 40%)
 - Low/mod households (weighted 20%)
 - Unemployed workers (weighted 20%)
 - Distribution grid capacity (weighted 20%)
- Allocated to utilities based on utility share of consumption served in each county.
- Existing capacity counts toward soft target.



Updated Approach

- Electric Consumption
 - Rationale: Generally, controls for proximity to load
 - Example: San Diego County consumes 7% of statewide electricity
 - Source: Energy Consumption Data Management System
- Low/mod households
 - Rationale: Economic development, environmental justice, and consistent with community planning and investment
 - Example: San Diego County has 8% of all persons in the State
 - Source: Department of Housing and Urban Development, 2011 Low/Mod Data



Updated Approach

- Unemployed persons
 - Rationale: Jobs and economic development
 - Example: San Diego County has 7.5% of unemployed persons
 - Source: “Labor Market Info” Report 400 C, Employment Development Department
- Grid capacity
 - Rationale: County distribution capacity with “no backflow” and same capacity assumption considered in CAISO High DG Transmission Planning Process
 - Example: San Diego County has 8.5% of statewide capacity
 - Source: Energy + Environmental Economics



California Energy Commission

Top 15 Counties

County	Soft Target (MW)	County	Soft Target (MW)
Los Angeles	3,006 (25%)	Fresno	399 (3.3%)
Orange	948 (8%)	Sacramento	378 (3.1%)
San Diego	906 (7.5%)	Contra Costa	338 (2.8%)
Santa Clara	636 (5.3%)	Ventura	260 (2.2%)
San Bernardino	626 (5.2%)	San Joaquin	254 (2.1%)
Riverside	620 (5%)	San Francisco	231 (1.9%)
Alameda	466 (3.8%)	San Mateo	223 (1.8%)
Kern	455 (3.7%)	All Other	2,253 (19%)



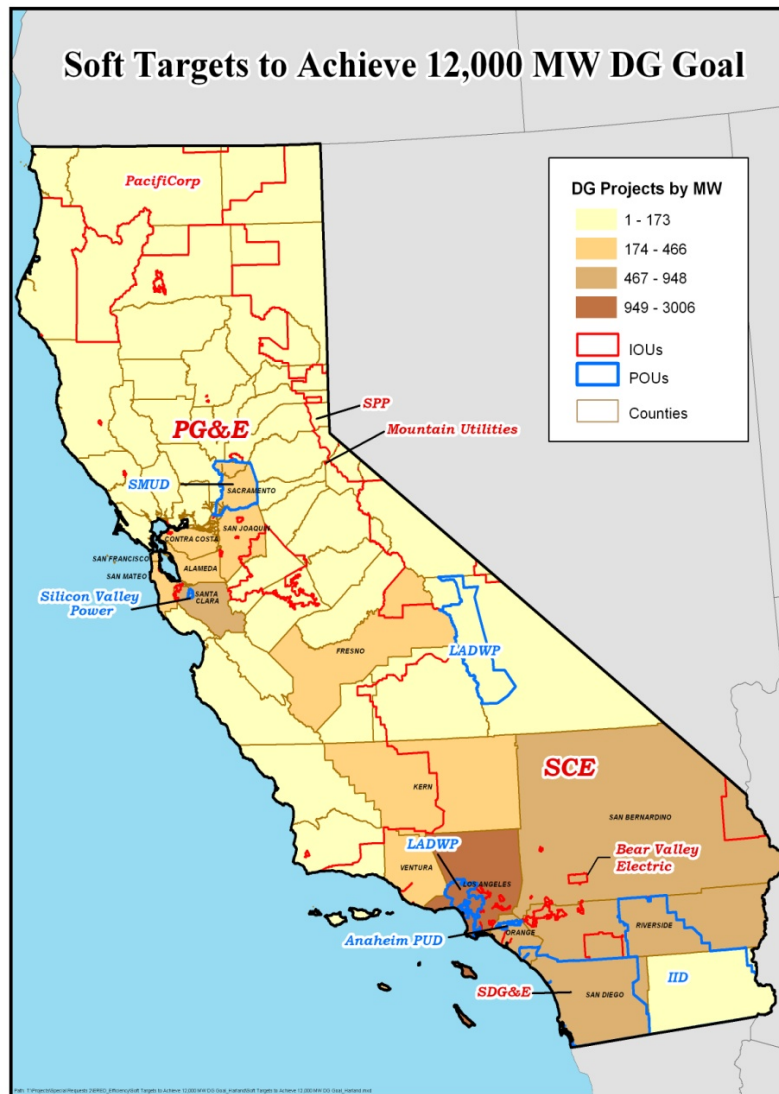
California Energy Commission

Top 10 Utilities/Others

Utility	Soft Target (MW)	Utility	Soft Target (MW)
PG&E	3,937 (33%)	City of Anaheim	166 (1%)
SCE	3,867 (32%)	WAPA Central Valley Project	151 (1%)
LADWP	1,072 (9%)	IID	146 (1%)
SDG&E	973 (8%)	Silicon Valley Power	123 (1%)
SMUD	366 (3%)	All Other	911 (8%)
Dept. of Water and Power (SWP)	280 (2%)		



California Energy Commission





Caveats to Updated Approach

- Interaction between consumption and capacity.
- Interaction between low/mod and unemployed.
- E3 analysis IOU service territories only.
- Will revisit soft targets periodically in future IEPRs.